

# Work Order ID 83436

April-18-12 8:16:25 AM

ASAP

\*83436\*

Page 1

Item ID: D3407-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Stem

Stop \*NS2\*

Start Date: 18/04/2012 Start Qty: 30.00

\*30\*

Cust Item ID:

Required Date: 25/04/2012 Req'd Qty: 30.00

\*30\*

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/18 Tooling:

Date:

Run Start \*NR1\*

QC:

Date: SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3407

Rev E

100

0.00

\*100\*

DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA596 Rev: \_\_\_\_ & Dwg D3407 Rev: \_\_\_\_ 2-Deburr

SL 12/4/29

31 0

110

0.00

\*110\*

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

SL 12/4/29

31 0

120

0.00

\*120\*

QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

SL 12/04/30

31 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 83436

**\*83436\***

Page 2

April-18-12 8:16:25 AM

Item ID: D3407-1

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Stem

Stop **\*NS2\***

Start Date: 18/04/2012 Start Qty: 30.00

**\*30\***

Cust Item ID:

Required Date: 25/04/2012 Req'd Qty: 30.00

**\*30\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

Identify as per dwg & Stock Location: WA

0.00

**\*130\***

Packaging

Memo

0.00

Packaging

*12/4/30* *(31)*

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

*12/4/30*

*mf*  
*12-04-30*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

April-18-12 8:16:29 AM

Page 1  
T

Work Order ID: 83436

\*83436\*

Parent Item: D3407-1

\*D3407-1\*

Parent Item Name: Stem

Start Date: 18/04/2012

Required Date: 25/04/2012

Start Qty: 30.00

Required Qty: 30.00

## Comments:

IPP Rev:A05.10.18New issueKJ/EC

IPP Rev:B Now on Doosan 08-05-14 JLM Verified By:DD

IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174R0.750		Purchased	No			100	f	73.2590	0.459	14.49474			

\*M174R0 750\*

17-4 round bar .750

\*\*

12/4/30

## Location

## Loc Qty

## Loc Code

MAT030

73.259

117683

0.465

118483

0.359

120196

5

121196

19.435

121282

48

16 21

8

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 83436
<b>Description:</b> Tow Ring		<b>Part Number:</b> D3407-1
<b>Inspection Dwg:</b> D3407 <b>Rev:</b> E		<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article      ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.063	+/-0.010	0.063	/		SA-9	Ver
1/4-28 UNF	Max: 0.2668 Min: 0.2635	0.264	/			
Major Ø	Max: 0.249 Min: 0.2425	0.243	/			
Ø0.625	+/-0.010	0.623	/			
Ø0.363	+/-0.010	0.361	/			
Ø0.750	+/-0.010	0.750	/			
R0.100	+/-0.010	R 0.100	/		R.G.	
0.470	+/-0.010	0.472	/			
0.500	+/-0.010	0.507	/			
3.250	+/-0.010	3.250	/			
4.250	+0.000/-0.010	4.246	/			
5.270	+/-0.010	5.269	/			2nd op
0.150	+/-0.010	0.152	/			
0.550	+/-0.010	0.550	/			
0.625	+/-0.010	0.622	/			
0.250	+0.010/-0.000	0.260	/			

<b>Measured by:</b> [Signature]	<b>Audited by:</b> [Signature]	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 12/4/29	<b>Date:</b> 12/04/30	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue	KJ/JLM	
B	07.07.18	Tolerances for diameters updated per Machinists	KJ/JLM	
C	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	
D	08.10.07	Dimensions updated per Dwg Rev E	KJ/DD	[Signature]

W/O:		WORK ORDER CHANGES					
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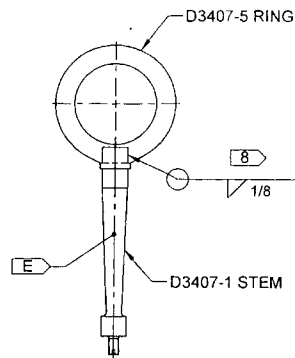
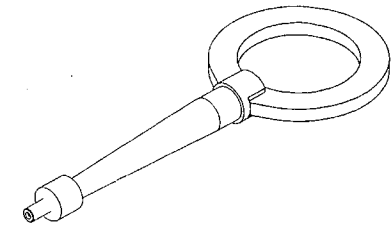
**NOTE:** Date & initial all entries



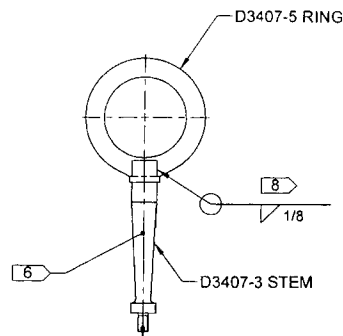
QTY -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3407-041	TOW RING
	X		D3407-043	TOW RING
		X	D3407-045	TOW RING
1			D3407-1	STEM
	1		D3407-3	STEM
1	1	1	D3407-5	RING
		1	D3407-7	STEM

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

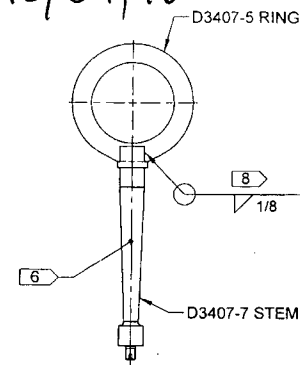
WITHOUT NOTICE  
WORK ORDER  
NO. 83436 MLJ  
12/04/18



D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING

RELEASED  
07-06-21-18

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

E	ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY	PH	08.07.23
D	D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY	PH	08.04.07
C	-1/-3 LONGER FOR FIT WWASHER	CP	05.09.09
B	UPDATE DIAMETER, THREAD CLASS ADDED	CP	05.06.17
A	NEW ISSUE	CP	05.03.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.23		

**DART AEROSPACE USA, INC.**  
PORT HADLOCK, WA

DRAWING NO. **D3407** REV. E  
SHEET 1 OF 5  
TITLE **TOW RING** SCALE NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

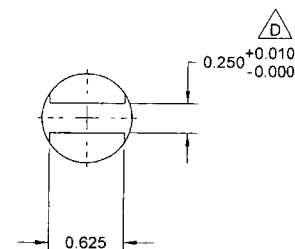
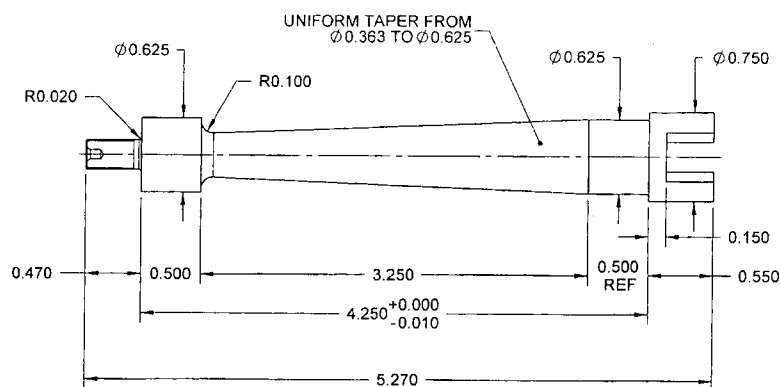
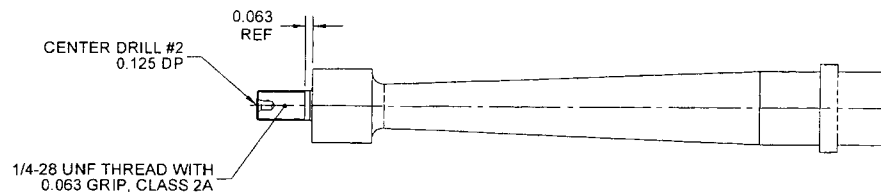
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

83436



# D3407-1 STEM

RELEASED

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.33 lbs

DESIGN		DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		TOW RING	NTS
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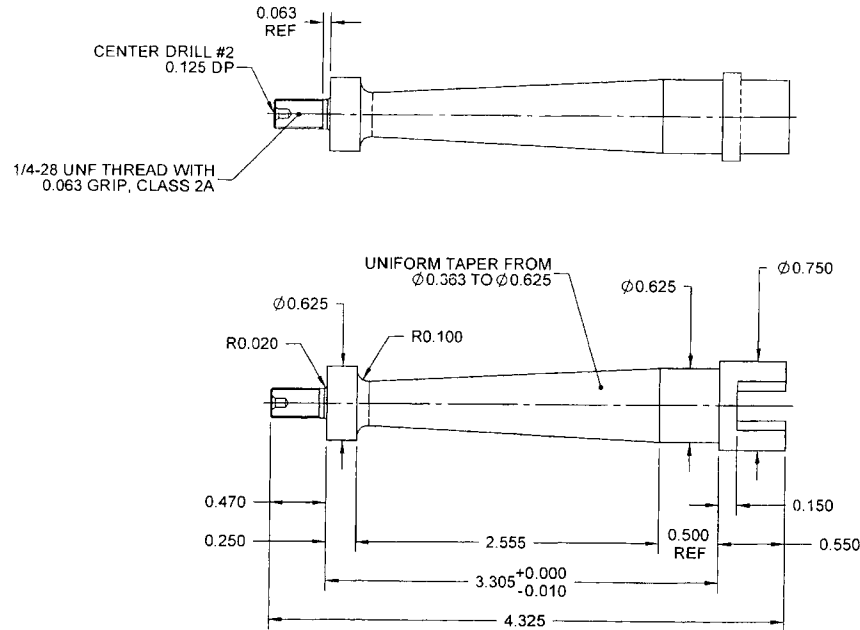
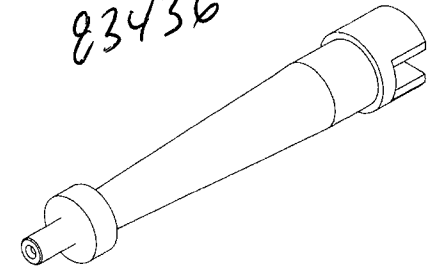
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

83436



**D3407-3 STEM**

**RELEASED**

- NOTES:
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.27 lbs

DESIGN		<b>DART AEROSPACE USA, INC.</b>	
DRAWN	JP	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3407	SHEET 3 OF 5
APPROVED		TITLE	SCALE
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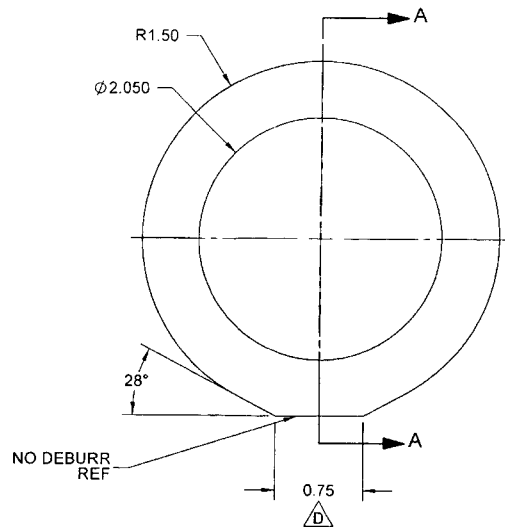
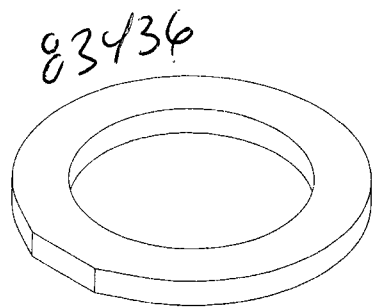
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

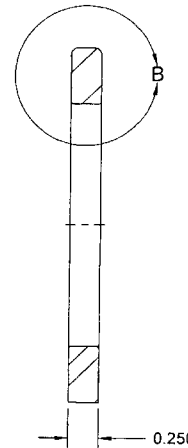
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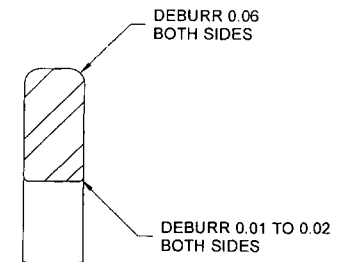
**NOTE:** Date & initial all entries



**D3407-5 RING**



**SECTION A-A**



**DETAIL B  
SCALE 2X**

**RELEASED**  
08-06-01-16

- NOTES:**
- 1) MATERIAL: 17-4 PH SS BAR PER AMS 5604/5643 (REF. DART SPEC M17-4-B)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.27 lbs

DESIGN	92	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	per	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3407	SHEET 4 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	TOW RING	NTS
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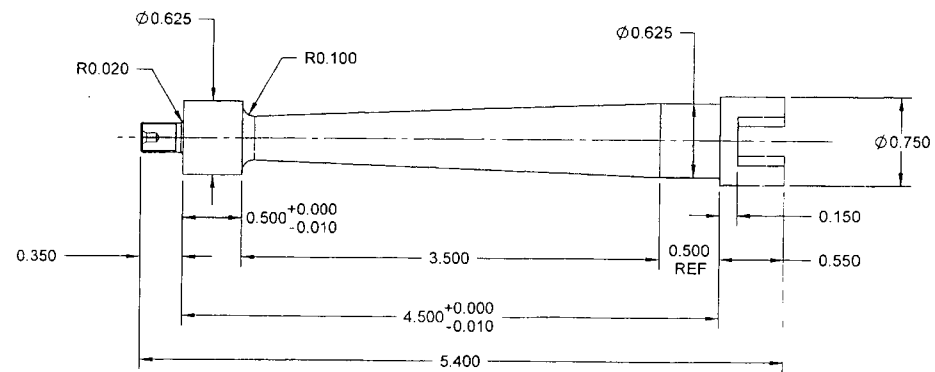
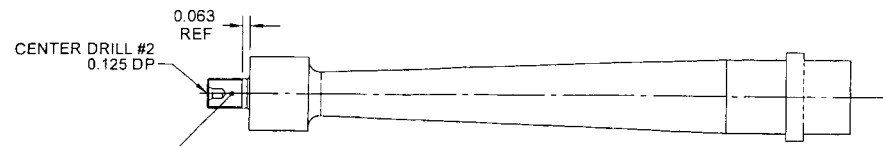
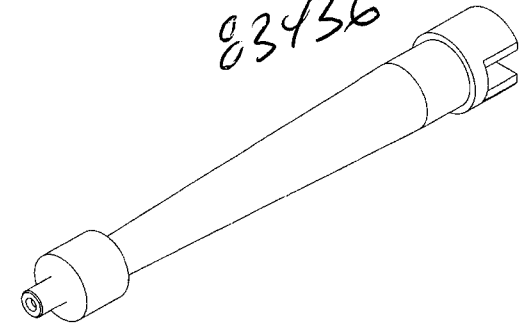
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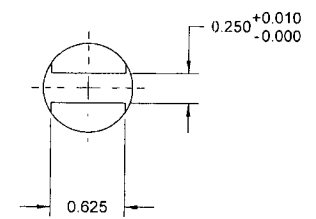
**NOTE:** Date & initial all entries



03436



**D3407-7 STEM**



**RELEASED**

- NOTES:**
- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
  - 6) IDENTIFICATION: N/A
  - 7) WEIGHT: 0.34 lbs

DESIGN	AJS	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	JPT	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		<b>D3407</b>	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		<b>TOW RING</b>	NTS
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